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THE RELATION OF THE MEDICAL PROFESSION TO SCHOOL EDUCATION.*

BY WALTER CHANNING, M.D.

The hold of tradition on the human mind has a most marked illustration in school education. Though the child is better understood physically and mentally than he was fifty years ago, and his needs are more apparent and methods of instruction have vastly improved, we still retain much that is antiquated, as well as useless, and even pernicious. While we have some idea of what should be done, we seem to lack the capacity of practically applying our knowledge.

In a recent article, "How shall the child be taught," † Dr. J. M. Rice has shown that by a process of exclusion about fifty per cent of the time spent on the three R's might, without detriment, be given up to other subjects, under the present school systems he argues, a great deal of time is wasted in the endeavor to teach the child details of subjects which can be of no practical value. For instance nearly one-

fifth of the time in some of the schools is devoted to spelling and penmanship, which is probably in excess of what is required. The trouble is that no satisfactory standard of what the child actually needs to fit him for life has as yet been determined. There is no sufficient differentiation of what may be primary, and what of secondary importance. It is theoretically believed that the primary school curriculum may be broadened without detriment to the three R's, but how is this to be accomplished?

The conservatism, bred of tradition and antiquated custom, which so hampers progress on the literary side of education, has up to the present time even more impeded development on the physical side. Can it with truth be said that it has ever received the careful study and attention that it deserves? Is there such a thing as a general system of education which includes a comprehensive and practicable plan of physical training? The

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Kindergarten, as projected by Froebel, certainly had such an aim in view, and the educational gymnastics of the Swedes have also been a valuable contribution to the subject, but can we say that the latter have been assimilated, correlated and made part of the frame-work of the education of our children?

As far as my own judgment goes, I should be obliged to answer in the negative, and say they have not.

I do not deny that physical training has forced itself for consideration on the attention of the community, and in the form of out-door sports, and athletics has had an important influence on the health and well-being of the people, and it must be further admitted that the schools themselves have from the outside been favorably reacted upon, and are visibly affected by the inflowing tide, and take a deep, active, and intelligent interest in these things. I might go still a step further, and admit that set gymnastics are not now as important in some schools as they might have been twenty-five years ago, for the very reason that children now receive a vastly greater amount of physical training outside the school than formerly. This is a subject of interest however which I will not consider here. Making due allowance for these facts it is still true that the physical side of education receives comparatively little attention, and is little understood.

If we seek for a reason we are led to the conclusion that public opinion is not as yet alive to its import-

ance, and if we seek for a reason for this ignorance, I fear we must acknowledge that we as physicians are largely responsible for it.

I hold it to be true that in matters of health physicians must be the teachers of the people, but if we are ignorant ourselves, how can we be teachers?

I regard it then as our first duty and at the present time perhaps our most important one, to investigate the subject of the *influence of education on health*. First we must know what a healthy child is. We should establish a standard of health at different ages demonstrable by measurements and tests, and not leave this matter to be half determined by lay teachers in colleges and gymnasiums. Having established such standards, we should next make similar ones for defective children, so that in the end we might be able to classify and grade them.

It will not be enough for us to say "that is not a healthy child," we must be able to prove it by rules, which, though simple and plain, will be accurate and capable of demonstration.

At first sight the problem may seem too difficult; surely we cannot become specialists in child-study, we are not psychologists. But this is not necessary, nor is the method of collective statistics or laboratory experiment the best one for our purpose.

Let us take the child as we find him and study him *clinically*, so to speak. Note physical characteristics, peculiarities, defects, and gradually

draw deductions from such facts as we find. A striking example of what can be done by pursuing such a course is furnished by Dr. Francis Warner, London. He found that nervous children presented certain rather uniform indications of their condition, such as imperfect nutrition, bodily defects, and particularly "nerve-signs," as he called them, such as over-aching, or under-aching muscles, feeble coördination imperfect eyesight and so on. He decided to examine London school children for these indications and has given us the results in 100,000 children. There was nothing difficult or complicated in his method, and any one of us might use it—and it was rapid as well as accurate. His results however were important, as they showed that there was a considerable number of defective children in the London schools, and they have led to the establishment of "special classes" for the education of such children. While we may not be able to achieve equally brilliant results, we can follow in his footsteps, and at least get a more definite knowledge of what the child is in plain, simple, medical terms.

It is a defect in the medical education of the present day that the whole time of the student is spent in first overloading his mind with a knowledge of elementary subjects far too detailed and minute, and then secondly in counter-balancing this knowledge with an infinity of pathological and clinical minutiae. Each set may have a value in its proper place, but it represents a part only, and not a

whole, and leaves a vast gap in the student's mind as to the *relative value and relation of health to disease*.

Less time should be spent on the details and more on giving comprehensive and broad and philosophic views of the human being as he is actually met with. To know him when sick, it will be of infinite advantage to have a standard of health to compare him with.

I would not recommend taking *more* time for the purposes which I indicate, but make a different use of *some* of it.

There should be a course in simple anthropometry, which would enable the student to make a record of bodily and mental conditions in healthy individuals, in this way calling his attention to various organic, or functional defects which now escape his notice. Elaboration would not be desirable, but rather a fundamental training for systematic observation. Were such courses given as the one I here indicate, I am sure that one result would be a better knowledge of physical training. For with an understanding of the organism as a whole, would come a search for remedial or corrective measures, which would develop or modify its action, as a whole.

When we consider how little the medical men actually know of the muscular, mental or nervous mechanism as an apparatus which can be operated as a unit, and made strong and powerful for the struggle for existence, how can we expect him to understand much about the practical

application of physical training? He is very much like a man who tries to sail a ship, who has been told how one is built and what all her parts are, and what should be done in case of accident, but has never been taught practical seamanship or seen a vessel at sea under sail in all kinds of weather. No one would think of trusting such a man to actually sail a ship, until he has learned by observation and experience how the ship as a whole acts and must be managed.

What is true of anthropometry, if we choose to apply this phrase for our purpose, as the study of bodily conditions in the healthy individual, is also true of general hygiene, sanitation, and so on. There should be also in these subjects, special courses in our medical schools for the purpose of awakening interest and training medical men for a better understanding of the conditions under which the community lives.

Assuming that the period finally arrives, when the medical profession have acquired as a part of their education some knowledge of the essentials of hygiene, sanitation and of physical training, that word being used in its broadest sense as meaning the care and development of the entire organism, how will they be able to apply what they have learned to the schools?

This question must be answered by saying, that while they have been learning what a healthy child is, and how he can be kept so, they have also been trying to find out what influence the school exerts on the

health of the child, and if it is bad, what can be done to modify it.

To find this out requires a knowledge of school education, and here again we are obliged to confess physicians have little, and often no idea of what modern school education really is. We often think we understand it, because we have once been school children ourselves, but that means hardly more than that we have a childish conception, or misconception, of its effect on one solitary individual. Experience at such an age is not quite the same teacher as later, when the mind can weigh and judge objectively, and without the prejudice and narrowness of its subjective side. It is pretty hard for a horse to realize why he must carry a burden, even if it is hay and grain for his own consumption, and so the child, laden down with his burden of studies and rules, can hardly be expected to appreciate the ultimate benefits which may result.

If we wish to learn what the underlying principles of education are, and how they can best be applied, we must bring ourselves into touch with those who carry on the schools, the teachers themselves — and not only that; we must visit the schools, and see them in operation. It may sound a little affected to say so, but I really believe every medical student would make a better physician, if he had to visit, under the direction of a teacher, as a part of his medical course, perhaps half a dozen schools. In this way he would be stimulated to enquire a little more

closely into the true meaning of education, than he is at present in the habit of doing.

We tend to segregation of professions too much. What we need is harmonious coöperation, or correlation of interests; mutual dependence; a nearer and consequently more intelligent insight into each other's work. We shall never learn by shutting our eyes.

Having reached a point when we know *what a healthy child* is, and *how he can be kept so*, and *what a school is*, we shall be competent to decide: 1st, to what kind of school, if any, the child shall go; 2nd, how he shall be graded when he gets there; and 3rd, what shall be done to keep him healthy.

To determine the first question will be no easy matter, for it includes a knowledge of proper school sites, size and arrangement of buildings, school desks, ventilation, plumbing and sanitary science in general. Perhaps such things will necessarily fall into the hands of experts, but I believe some idea of them is requisite for a physician who is to have any direction or oversight of the health of school children, or even to pronounce opinions on these matters.

The second question, of grading should be entirely in the hands of medical men, as far as physical condition is concerned, and Dr. Warner, already referred to, has shown how this can readily be done. It is of the utmost importance that we should be able to promptly recognize and differentiate dull, apathetic, feeble-minded, nervous

children, from those that are bright well and strong, and I believe that this is an obligation from which none of us can escape.

The third question, of keeping the child healthy in the school, is too far reaching to go into in a few words like these. The recognition of contagious or infectious diseases; diseases of the lungs, skin, and so on, I will merely allude to in passing, as already they have occupied much attention. The problems of physical training are many, and not easy of solution, and will require years of patient study. As I have already intimated, physical training must mean the intelligent care and development of every portion of the organism. Gymnastics, only as yet imperfectly understood, and often poorly taught, while capable of accomplishing great results, are merely one side of the all round, general training to be sought after. Athletics and sports, in their ethical as well as in their physical aspects require most careful investigation. Who can tell us the nature and value of exercise? What are the physiological indications for exercise, and what the contra-indications? How does muscular work effect the brain, and how does mental work? Are pupils actually doing too much work in the schools or too little? Are two school sessions better than one? Are children dressed properly? How long can they go without food? What is the physiological effect of manual training?

Such are a few of the problems in this one direction of physical train-

ing, which it appears to me medical men are in the near future bound to take up and study in a plain common-sense way.

Education is the corner-stone upon which the success of the community rests, but health is of even greater importance, for it is the very rock-bottom underneath the corner-stone. Looked at broadly, education is something vastly greater than mind cultivation; it is the very sap of the tree which influences the growth of every

individual fibre. To us as physicians is entrusted the health of the people, and the time is not far distant, when we shall feel ourselves equally responsible with our educators for what the schools stand for, for in them we shall find our best opportunities for combatting transmitted tendencies and defects, which, in these modern days, environment tends to transform into actual potentialities of deterioration, if not degeneration.

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